

In the claims:

Please amend the claims as follows:

1. (currently amended) Equipment for exchanging power, in shunt connection, with an electric power network, the power network having a nominal voltage of a fundamental frequency and a given phase position, the equipment comprising:

a reactive impedance element comprising a capacitor, and

a voltage source converter for mutual connection in series, the converter being intended for generation of a fundamental voltage within a control range that limits the amplitude of the generated fundamental voltage, wherein the control range of the converter limits the amplitude of the fundamental voltage to a value that is lower than the nominal voltage of the power network and comprises generation of a reactive component of the fundamental voltage with a phase position that either coincides with the phase position for the voltage of the power network or that deviates by 180° electrically from the phase position for the voltage of the power network.

2. (cancelled)

3. (cancelled)

4. (currently amended) Equipment for exchanging power, in shunt connection, with an electric power network, the power network having a nominal voltage of a fundamental frequency and a given phase position, the equipment comprising:

a reactive impedance element comprising an inductor,

a voltage source converter for mutual connection in series, the converter being intended for generation of a fundamental voltage within a control range that limits the amplitude of the generated fundamental voltage, wherein the control range of the converter limits the amplitude of the fundamental voltage to a value that is lower than the nominal voltage of the power network and comprises generation of a reactive component of the fundamental voltage with a phase position that either coincides with the phase position for the voltage of the power network or that deviates by 180° electrically from the phase position for the voltage of the power network, and
~~The equipment according to claim 3, wherein it comprises~~

a transformer connected between the inductor and the converter.

5. (previously amended) The equipment according to claim 1, wherein the control range of the converter comprises, in addition thereto, generation of an active component of the fundamental voltage with a phase position that deviates from the phase position for the voltage of the power network by +90° electrically or by -90° electrically and with an amplitude that brings about an exchange of active power with the power network.

6. (previously amended) The equipment according to claim 1, wherein the converter comprises a control system for controlling the fundamental voltage generated by the converter with respect to amplitude and phase position within the control range, in dependence on electric variables sensed in the power network.

7. (previously amended) The equipment according to claim 6, wherein the control

system comprises means for forming a reference value for the current of the converter, in dependence on a voltage variation sensed in the power network, said reference value resulting in both an active and a reactive component of the fundamental voltage.

8. (currently amended) Equipment for exchanging power, in shunt connection, with an electric power network, the power network having a nominal voltage of a fundamental frequency and a given phase position, the equipment comprising:

a reactive impedance element, and

a voltage source converter for mutual connection in series, the converter comprising a control system for controlling the fundamental voltage generated by the converter with respect to amplitude and phase position within the control range in dependence on electric variables sensed in the power network, the control system comprising means for forming a reference value for the current of the converter in dependence on a voltage variation sensed in the power network, said reference value resulting in both an active and a reactive component of the fundamental voltage, the converter being intended for generation of a fundamental voltage within a control range that limits the amplitude of the generated fundamental voltage, wherein the control range of the converter limits the amplitude of the fundamental voltage to a value that is lower than the nominal voltage of the power network and comprises generation of a reactive component of the fundamental voltage with a phase position that either coincides with the phase position for the voltage of the power network or that deviates by 180° electrically from the phase position for the voltage of the power network, ~~The equipment according to claim 7,~~ wherein said means for forming a reference value in the control system comprises means for forming, in dependence on a sensed current and a sensed voltage in the power network, a value of active power flow in the

power network, a signal-processing member with a phase-advancing characteristic in a frequency interval surrounding the frequency 8.8 Hz which is supplied with said value of active power flow in the power network, and means for forming the reference value for the current of the converter in dependence on an output signal from said signal-processing member.

9. (currently amended) A method for exchanging power, in shunt connection, with an electric power network with a nominal voltage of a fundamental frequency and a given phase position, ~~wherein~~ the method comprising:

connecting a reactive impedance element and a voltage source converter ~~are connected~~ to each other in series connection and in shunt connection to the power network, ~~and~~ wherein the converter generates a fundamental voltage within a control range that limits the amplitude of the generated fundamental voltage, wherein the converter comprises a control system for controlling, in dependence on electric variables sensed in the power network, the fundamental voltage generated by the converter, with respect to amplitude and phase position, within the control range,

choosing the control range of the converter ~~is chosen~~ such that the generated fundamental voltage is lower in amplitude than the nominal voltage of the power network, and comprises generation of a reactive component of the fundamental voltage with a phase position that either coincides with the phase position for the voltage of the power network or that deviates by 180° electrically from the phase position for the voltage of the power network,

forming a value of active power flow in the power network,

supplying said value of active power flow in the power network to a signal-processing member with a phase-advancing characteristic in a frequency interval surrounding the frequency

8.8 Hz,

a reference value for the current of the converter is formed in dependence on an output signal from said signal-processing member, which reference value results in an active component of the fundamental voltage generated by the converter

~~whereby~~ achieving a reactive power exchange with the power network ~~is achieved~~ by controlling the fundamental voltage generated by the converter within the control range.

10. (currently amended) The method according to claim 9, wherein

the control range of the converter is chosen such that, in addition thereto, it comprises generation of an active component of the fundamental voltage with a phase position that deviates from the phase position for the voltage of the power network by $+90^\circ$ electrically or by -90° electrically,

whereby an active power exchange with the power network is achieved by controlling the voltage generated by the converter, with respect to its amplitude, within the control range and to a phase position that deviates from the phase position for the voltage of the power network by $+90^\circ$ electrically or by -90° electrically.

11. (cancelled)

12. (original) Use of equipment according to claim 1 for exchange of reactive power with an electric power network.

13. (currently amended) Use of equipment according to claim 3 1 in transmission lines

for reducing overvoltages, for damping power oscillations, and for voltage control at varying transmission of power in the transmission line.

14. (original) Use of equipment according to claim 8 for exchange of active power with a power network for reducing flicker.

15. (previously presented) Use of equipment according to claim 4 in transmission lines for reducing overvoltages, for damping power oscillations, and for voltage control at varying transmission of power in the transmission line.